Nahid Zoueshtiagh/R9/USEPA/US
03/27/2006 08:02 AM

To Joseph Lapka/R9/USEPA/US@EPA, Margaret Alkon/R9/USEPA/US@EPA
cc
bcc
Subject Fw: BHP Cabrillo BHP revised draft EIR

----- Forwarded by Nahid Zoueshtiagh/R9/USEPA/US on 03/27/2006 08:00 AM -----

Marty Kay <mkay@aqmd.gov>
03/24/2006 03:14 PM

To Nahid Zoueshtiagh/R9/USEPA/US@EPA, gyee@arb.ca.gov
cc
Subject FW: BHP Cabrillo BHP revised draft EIR

FYI

Martin Kay
Program Supervisor
South Coast Air Quality Management District
21865 Copley Dr.
Diamond Bar, CA 91765-3252
909.396.3115
mkay@aqmd.gov

-----Original Message-----
From: Marty Kay
Sent: Friday, March 24, 2006 12:02 PM
To: Steve Smith
Cc: Chung Liu; Mohsen Nazemi
Subject: RE: BHP Cabrillo BHP revised draft EIR

Thanks, Steve.

I reviewed the DEIR; they mention the hot gas issue on pages 4.6-23 and 24 but don't evalutate or mitigate it.

I also found an error in their emission calculations for the large 8 MW dual-fuel generators (App. G2, Table FSRU 5) on board the FSRU (floating terminal) that result in underestimating all generator emissions by 10% percent. The EPS Method 19 F-factor they used of 8713 (actually should be 8710) dscf/MMBtu of natural gas burned is based on MMBtu of higher heating value (HHV), but I believe the Wartsila specs (7239 Btu/kW-hr and 47.1% eff.) they used to compute the MMBtu/hr consumed are based on lower heating value of natural gas. The stated efficiency and heat rate of the engines is impossible based on HHV (and even questionable high based on LHV), therefore they are probably based on lower heating value, which is customary in the engine industry. Since HHV is about 10% more than LHV for natural gas, the calculated heat input rates, exhaust flowrates and mass emissions will be about 10% higher if the Wartsilla specs are converted to HHV.

Also, for the tugs and crew boats they are using EPA emission factors for 4-cycle, lean-burn natural gas engines. But these vessels will be compression-ignition, dual-fuel engines (with diesel pilot fuel) which can have much higher NOx emissions than what was calculated. Since they are dedicated vessels, they should get actual engine specs like they did for the equipment on the FSRU. (BHP told us in the meeting they think they will may get even lower NOx engines (1.3 g/kW-hr or 1.0 g/bhp-hr) from Wartsilla. This is very good, but If so, it should be a committed mitigation measure.)

Marty

-----Original Message-----
From: Steve Smith
Sent: Thursday, March 23, 2006 10:23 AM
To: Marty Kay
Subject: BHP Cabrillo BHP revised draft EIR

Marty,
The link below will take you to the BHP Cabrillo LNG project revised draft EIR.
Steve
http://www.slc.ca.gov/Division_Pages/DEPM/DEPM_Programs_and_Reports/BHP_DEIS-R.htm